Event Predictors

Event Predictor: LeovsGeo

Predict events for a LEO satellite vs. GEO satellite

Applies to: All plans where the *target* collection corresponds to a LEO satellite, and *reference* corresponds to a GEO satellite, or vice-versa.

property	help	required?	default?
geoFootprint	Half of the angle of a cone with vertex at Earth center. This defines the GEO instrument FOV.	Yes	from GEO data collection
sunscdeg	Maximum allowable angle between S/C position vector and sun vector (for nighttime set to <= 180, for daytime set to <= 90)	Yes	90
dt	Time interval of orbit propagation (seconds)	Yes	10
razmax	Allowable differences in observation relative azimuth angles (degrees); difference can not be larger than 180	Yes	20
leoSwath	Twice the scan angle of the LEO instrument	Yes	from LEO data collection
vzmax	Allowable differences in observation viewing zenith angles (degrees); difference can not be larger than 180	Yes	10

Event Predictor: LeovsLeo

Predict events for a LEO satellite vs. LEO satellite.

Applies to: All plans where both the *target* and *reference* collections correspond to a LEO satellite.

property	help	required?	default?
sunscdeg	Maximum allowable angle between S/C position vector and sun vector (for nighttime set to <= 180, for daytime set to <= 90)	Yes	90
dt	Time interval of orbit propagation (seconds)	Yes	1
twindow	Temporal window allowed for intercalibration (minutes)	Yes	2.5
razmax	Allowable differences in observation relative azimuth angles (degrees); difference can not be larger than 180	Yes	30
vzmax	Allowable differences in observation viewing zenith angles (degrees); difference can not be larger than 180	Yes	15
szmax	Allowable solar zenith angle at target point (degrees)	Yes	75
referenceSwath	Twice the scan angle of the reference LEO instrument	Yes	from reference data collection
targetSwath	Twice the scan angle of the target LEO instrument	Yes	from target data collection

Event Predictor: LeovsGround

Predict events for a LEO satellite vs. ground station.

Applies to: All plans where the *target* data collection corresponds to a LEO satellite.

property	help	required?	default?
dt	Time interval of orbit propagation (seconds)	Yes	1
sunscdeg	Maximum allowable angle between S/C position vector and sun vector (for nighttime set to <= 180, for daytime set to <= 90)	Yes	180
leoSwath	Twice the scan angle of the LEO instrument	Yes	from target data collection
twindow	Temporal window allowed for intercalibration (minutes)	Yes	2.5

razmax	Allowable differences in observation relative azimuth angles (degrees); difference can not be larger than 180	Yes	180
vzmax	Allowable differences in observation viewing zenith angles (degrees); difference can not be larger than 180	Yes	180
szmax	Allowable differences in observation solar zenith angles (degrees); difference can not be larger than 180	Yes	180
filterViewAngles	If set to true, use the above view angles when computing events	Yes	true
groundlat	Latitude coordinate of ground site (center & radius)	if using center & radius	
groundlon	Longitude coordinate of ground site (center & radius)	if using center & radius	
groundrad	Radial arclength of ground site in km (center & radius)	if using center & radius	
groundLatNorth	Northern latitude limit of ground site (bounding area), range -90 to 90	if using bounding area	
groundLatSouth	Southern latitude limit of ground site (bounding area), range -90 to 90	if using bounding area	
groundLonWest	Western longitude limit of ground site (bounding area), range -180 to 180	if using bounding area	
groundLonEast	Eastern longitude limit of ground site (bounding area), range -180 to 180	if using bounding area	